

GRADE: K - Adult
TIME: 45 min.-1 1/2 hr.
SEASON: spring, summer, fall

AQUATIC LIFE

NATIONAL SCIENCE STANDARDS:

- A. Science as an **INQUIRY**
- B. **PHYSICAL** Science
- C. **LIFE** Science;
- E. Science **TECHNOLOGY**
- F. Science in **PERSONAL** and **SOCIAL PERSPECTIVE**
- G. **HISTORY** and **NATURE** of Science

Background Information

Ponds, lakes, and streams provide habitats for a diverse group of aquatic animals. From turtles, frogs, and fish, to insects, worms, and microscopic inhabitants, each plays a vital role in the ecosystem. Each has a special relationship with its environment and with the other organisms within its habitat.

Objective:

Students will visit an aquatic ecosystem in order to collect and identify animals found there. A food chain can be demonstrated using living examples.

Pre Activity:

Bring water from a nearby pond or creek. Look at it under the microscope. Try to identify the creatures in the water using Pond Life Guide cards (borrow them from Springbrook).

Equipment:

For each group of 2-6 students:

- dipnet
- 2- bug boxes
- dish pan
- eye dropper
- aquatic life guide
- Tupperware box
- Worksheet*
- Pencil*
- Brought by leader*

Procedure:

1. Set out equipment (provided by the Conservation Education Center).
2. Lead group to study site (pond, lake, or stream), bringing equipment along
3. Divide students into groups, with 2-6 students per group.
4. Explain that the students will be collecting as many different kinds of animals as possible.
*Point out equipment and describe the use of each piece, including aquatic life guide for identification.
5. Explain the procedure for collecting animals. Students will first put 2-4 inches of clear water into the dishpan. Using the nets, they will sweep through the water, making sure to include plant material, bottom sediment, and the water's edge in their search. Once netted, animals should be picked out using fingers or droppers and placed into the clear water in the dishpan. (Entire contents of nets should not be dumped into the dishpan, as this will make the water too cloudy for observation.) Tupperware boxes can be used for closer examination of animals. Individual specimens may be placed in bug boxes with an appropriate amount of water and viewed under magnification. The aquatic life guide sheets will be helpful for identification of insects. A *Pond Life* guide may be consulted for more in-depth information. Food chains can be demonstrated using the animals and plants found in the area.
6. All aquatic animals should be carefully returned to the water. Nets and tubs should be emptied, rinsed, and returned to the area behind the dining hall following the final session.

Post Activity:

- Go to a nearby pond or waterway and pick up litter. Collect water samples, make a wet slide, and view under the microscope for aquatic life.
- Go on the internet to "iowater" site to see what you can do as a class/individual to help Iowa's water systems.

Post Discussion:

- What animals did you discover? Compare findings with another "scientist" on what was discovered...similarities and differences!
- Observing the characteristics of the specimens found, can you identify the classification in which they belong?
- What are the needs of the species you found and how are they being met?
- Which stage of the life cycle is your specimen and what other stages are inevitable?
- What effects the changes of the life cycle of the specimen?
- How do **you** (people) effect that change of an environment?
- How do people in general (across the world) change this habitat?
- How do pond environments help our world, your environment, and **YOU**?
- What can people do to promote the positive changes and eliminate the negative changes to the pond environment?